

Sewers

SANITARY SEWER RECONSTRUCTIONS AND EXTENSIONS

<u>Subtasks</u>	<u>Priority</u>	<u>Estimated Useful Life of Improvement</u>	<u>Project Manager</u>
Replacement/ Rehabilitation of Sanitary Sewer Lines	Essential	40 years	T&ES

Project Summary: This project provides for the construction of new sewer mains and the replacement and rehabilitation of old lines as needed. The project also includes funds for the City's share of the cost of sewer extensions required for development. This is an essential infrastructure maintenance project.

Project Description: In FY 1987, the City initiated an on-going program to reline existing leaking sewers in the City. Recent sewer projects completed include Beverley Drive, Circle Terrace, Walnut Street, Pine Street, Birch Street, MacArthur Road and Tennessee Avenue. Streets either under design or under construction include: Timber Branch Drive, West Uhler Avenue, Caton Avenue, Groves Avenue, Forrest Street, Sycamore Street, Hickory Street and Diagonal Road.

Repair of existing, aging sanitary sewers City-wide is an ongoing need, funded at \$200,000 each year, from FY 2007 through FY 2012 in the CIP. An additional \$1.8 million over six years (\$300,000 per year) is budgeted for a comprehensive relining program that will fund the relining of sewers outside of the City's Inflow and Infiltration (I/I) program areas on an annual basis beginning in FY 2007.

Other sanitary sewers in the City have more significant problems and require reconstruction. Sites identified with non-standard existing sanitary sewers that have high maintenance problems that are slated for reconstruction include the following:

- The siphon at Hooff's Run;
- The siphon at Commonwealth Avenue and Glebe Road; and
- The siphon near Edison Street and Four Mile Run.

While these projects have been identified as needing construction, other projects may be added or substituted as identified.

Construction projects are budgeted at \$220,000 each year from FY 2007 through FY 2012. In addition, \$100,000 per year from FY 2007 through FY 2012 combined with \$300,000 in unallocated prior year monies budgeted for the design of sanitary sewer projects by outside engineering consultants.

SANITARY SEWER RECONSTRUCTIONS AND EXTENSIONS

Change In Project From Prior Fiscal Years:

- Extend annual funding (\$200,000) for relining of sewers into FY 2012;
- Extend annual funding (\$220,000) for sanitary sewer construction into FY 2012;
- Extend annual funding (\$100,000) for the design of sanitary sewer projects by outside engineering consultants into FY 2012;
- Extend annual funding (\$300,000) for the comprehensive relining program so that sewers outside of the City's Inflow and Infiltration (I/I) program areas can be relined into FY 2012; and
- The sanitary sewer line maintenance charge for FY 2007 remains at \$1.00 per 1,000 gallons of water consumption as part of the Council approved multi-year phased rate increase intended to attain full cost recovery of all sanitary sewer maintenance and construction expenditures. A higher rate may be needed beyond the \$1.00 rate in subsequent fiscal years if VADEQ mandates new CSO requirements.

TASK TITLE	UNALLOCATED PRIOR-FY	FY 2007 CURRENT	FY 2008 FY + 1	FY 2009 FY + 2	FY 2010 FY + 3	FY 2011 FY + 4	FY 2012 FY + 5	TOTAL
CONSTRUCTION	220,000	220,000	220,000	220,000	220,000	220,000	220,000	1,540,000
CONSULTANT FEES	100,000	100,000	100,000	100,000	100,000	100,000	100,000	700,000
COMPREHENSIVE RELINING PROGRAM	625,000	300,000	300,000	300,000	300,000	300,000	300,000	2,425,000
RELINING SEWERS	200,000	200,000	200,000	200,000	200,000	200,000	200,000	1,400,000
TOTAL PROJECT	1,145,000	820,000	820,000	820,000	820,000	820,000	820,000	6,065,000
LESS REVENUES	0	0	0	0	0	0	0	0
SEWER FEE FUNDED	1,145,000	820,000	820,000	820,000	820,000	820,000	820,000	6,065,000

SEWER REHABILITATION AND POLLUTION ABATEMENT

<u>Subtasks</u>	<u>Priority</u>	<u>Estimated Useful Life of Improvement</u>	<u>Project Manager</u>
Mitigation of Combined Sewer Overflows	Essential	40 years	T&ES
Royal Street Relief Sewer	Very Desirable	40 years	T&ES
Correction of Infiltration/Inflow	Essential	40 years	T&ES
Holmes Run Trunk Sewer	Essential	40 years	T&ES
Sewer Map Update	Essential	As Updated	T&ES
Environmental Restoration	Essential	25 years	T&ES

Project Summary: This project provides for engineering, planning, design and construction of improvements to the City's combined and separate sanitary sewer systems. The project is required to meet federal and State regulations for the control of combined sewer overflows (CSOs) and separate sanitary sewer overflows (SSOs). Additionally, the project will provide flooding and capacity relief in areas where the capacity of existing sewers is insufficient to handle current and projected flows, and ultimately reduce the CSOs. By implementing this project, the City will be proceeding to upgrade its sewer system infrastructure and bringing it into compliance with federal and State regulations.

Mitigation of CSOs: The City's combined sewer system includes areas east of the railroad corridor (primarily Old Town) and is an area of approximately 560 acres. CSO outfalls (discharge points for wet weather overflows) are located at the foot of Pendleton Street and Royal Street and under Duke Street at Hooff's Run.

The City, through its engineering consultant, began studies in the early 1990's to seek alternative approaches to control combined sewer overflows and in 1995 submitted a Long Term Control Plan (LTCP) to the Virginia Department of Environmental Quality (VADEQ). The VADEQ issued the City a permit for its combined sewer system in 1995. Based on the City's studies, the permit calls for the City to operate and maintain the combined sewer system according to the United States Environmental Protection Agency's (USEPA) technology-based best management practices. The practices are known as the Nine Minimum Controls (NMCs) and form part of the National CSO Control Policy. The nine minimum controls which the City implemented for controlling CSO discharges comprise the following:

1. Proper operation and regular maintenance programs for the sewer system and the combined sewer overflows;
2. Maximum use of the collection system for storage;
3. Review and modification of the pretreatment program to assure CSO impacts are minimized;
4. Maximization of flow to the publicly owned and treated works (POTW) for treatment;

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5. Prohibition of CSOs during dry weather;
6. Control of solid and floatable materials in CSOs;
7. Pollution prevention programs that focus on containment reduction activities;
8. Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts; and
9. Monitoring and reporting to effectively characterize CSO impacts and the efficacy of CSO controls.

The VADEQ reissued the City's VPDES permit in August 2001. The re-issued permit provides for the nine minimum controls to be the long term CSO control plan for the City. However, there are requirements for increased management, monitoring, evaluations and review over the five year term of the permit. These increased practices include:

- A five year bacteria monitoring and modeling program for Hunting Creek to assess impacts of CSO discharges from Royal Street and Duke Street (via Hooff's Run) outfalls.
- Additional monitoring, modeling, reporting and evaluation throughout the permit term of the discharges from all CSO outfalls.
- More frequent inspections, increased maintenance activities and more detailed record keeping and performance reporting for all parts of the combined sewer system.

The City is required to re-apply for its permit during FY 2006 and the permit is expected to be re-issued during FY 2007. As a result of the analysis required under the current permit, future permits may require the City to revise its LTCP, which may include partial separation, detention, or end of pipe technologies. An "Area Reduction Plan" study identifies areas within the combined system shed that can be potentially separated as part of new development or re-developments.

There is \$1.83 million in prior year unallocated funds available for this project. These funds will be used for the programs required by the existing permit. Funds in the amount of \$1.5 million, or \$250,000 per year from FY 2007 to FY 2012, will be used to continue the implementation of permit conditions and solids and floatables control through FY 2012.

Correction of Infiltration/Inflow: This project provides for the evaluation and remediation of infiltration/inflow conditions in older parts of the City's separate sanitary sewer system. The areas include the sanitary sewer systems tributary to the Commonwealth Interceptor and areas in the Holmes Run sewer service area. During wet weather, infiltration and inflow into these older sanitary sewers have created overload conditions causing basement back-ups. This project will identify leaking sewers and connections which allow excessive infiltration/inflow to enter sewers and correct the problem through the repair of the sewers and removal of direct storm water such as down spouts. Loss of capacity due to infiltration/inflow in the Four Mile Run area (tributary to the Commonwealth Interceptor) at times causes sanitary sewer overflows (SSOs) from the Four Mile Run Pump Station.

The correction program was started in FY 1999 when studies were conducted by the City's consultant in the Four Mile Run sewer service area. This area is a tributary to the Four Mile Run Pumping Station and comprises the upper part of the City served by the Commonwealth Interceptor. As a result of these studies, the City's consultant has been conducting field inspections and flow monitoring of the existing sewers. The field inspections include street by street TV investigations of sewers, followed by visual investigations of connections employing

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nondestructive methods such as dye and smoke testing to identify the sources of connections to the existing sewers.

The field work and monitoring is being performed by dividing sewer service areas into sections and proceeding through each section sequentially. Field work has been completed in the sanitary sewer systems tributary to the Commonwealth Interceptor and field work in the Holmes Run sewer service area is being scheduled. The studies show that the sanitary sewers require substantial repairs to correct broken and cracked pipe, root intrusion, leaking joints, damaged connections between street sewers and laterals (house sewer connections) and leaking manholes. Most of the conditions can be remediated by internal repair methods such as installation of an internal lining in the pipe. However, some conditions such as broken pipe will require excavation and replacement to restore the structural integrity of the sewer.

The information from the field work completed to date shows that the relining and repairs required to reduce inflow and infiltration to non-excessive quantities and restore structural integrity are substantially greater than previously anticipated.

Funds of approximately \$4.2 million were allocated to correct conditions in the separate sanitary sewers in the Four Mile Run, Commonwealth and Taylor Run sewer sheds. The construction phase for the Four Mile Run sewer shed is scheduled to be completed before the end of CY 2005. Construction on the Commonwealth Interceptor sewer shed began in Fall 2005.

Royal Street Relief Sewer: This project, approved in FY 2001, provides for the engineering and construction of relief measures to alleviate flooding at the intersection of Pitt and Gibbon Streets. Based on the findings of the consultant, portions of the combined sewer in areas constructed in the early 1900's are inadequate to carry the storm water flows connected to them.

Final design, with additional drainage improvements for Pitt Street extending to Union Street, was completed in FY 2005. Construction is underway and was scheduled for completion in Summer 2006. However, unforeseen site conditions have caused delays in this project, as well as additional costs. A portion of the project needed to be redesigned to accommodate an unknown utility structure. Additionally, unanticipated contaminated soil was uncovered during construction and remediation efforts have added to the scope of work and has extended the project schedule. As a result, an additional \$830,000 has been budgeted in FY 2007 to address the remediation of the contaminated soil and to address the unforeseen site conditions. The project is now scheduled to be completed in Winter 2006.

Holmes Run Trunk Sewer: This project provides for increasing the capacity in the Holmes Run Trunk sewer line that is required to support the rapid development occurring in the Eisenhower Valley, as well as future development and redevelopment in the West End. Preliminary engineering studies indicated that lining the existing sewer with specialized materials would provide the needed capacity increase with minimal environmental disruption. Relining will increase the capacity in the western portion of the sewer. However, further analysis has determined that pipe lining alone will not increase capacity sufficiently in the East Eisenhower section. A relief sewer will need to be constructed from Eisenhower Avenue to the Alexandria Sanitation Authority plant. As a result of this change, an additional \$1.7 million has been budgeted to fund the additional construction costs for the first phase of this project. The City is proceeding with design and construction as the next steps. A total of \$8.9 million is budgeted, including \$4.3 million in prior year unallocated monies, \$3.0 million in FY 2007 and \$1.6 million in FY 2008, for this project although exact cost and timing will be refined after additional planning and designs are completed. In this CIP, the funding has been revised. \$1.7 million has been added to the project budget and the funding accelerated. The project is now

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budgeted over two years (FY 2007 and FY 2008) rather than the three years budgeted in the FY 2006 - FY 2011 Approved CIP. This project is scheduled to be completed in FY 2008 and has a useful life of 40 years. This project does not have an impact on the City's operating budget as the Alexandria Sanitation Authority maintains this trunk sewer.

Sewer Map Update: This project, approved in FY 2001, provides for the mapping of the City's sanitary and storm sewer systems. The City does not have a comprehensive inventory of the existing subterranean sanitary and storm sewer systems. Existing maps were last updated in the 1970's and projects completed since that time are not documented or mapped. Once sanitary sewer and stormwater permit regulations, currently being adopted by the U.S. Environmental Protection Agency, are applied to the City, the City will be required to perform much more accurate assessments of the capacity of City sewers and demonstrate compliance with prospective permit requirements.

The field inventory located 30 percent more sewer structures than were originally indicated by primary estimates. As a result, a total of \$465,000 remains budgeted (\$165,000 in unallocated prior year monies and \$300,000 in FY 2007) to account for these additional structures and complete the City-wide mapping. These maps will be compatible with and become part of the City's Geographical Information System (GIS).

Environmental Restoration: This program provides for various projects within the City that will enhance the local environment, including stormwater, air and groundwater, in areas that are significantly contributing pollutants to the environment. In an effort to maximize the benefits of the program, the monies budgeted under this program may be used as matching funds to obtain additional grant funding from various State and federal programs. Projects that may be undertaken under this program include stream restoration; water quality improvement structures; wetland enhancement; riparian buffer planting; invasive species removal and identification of potential environmental enhancement project locations. The City conducted a stream assessment project as part of this program which was completed in early FY 2006 and identified and prioritized restoration opportunities in and along City streams. A total of \$525,000 (\$225,000 in prior year unallocated monies; \$100,000 in FY 2008; \$100,000 in FY2010; and \$100,000 budgeted in FY 2012) has been budgeted for this program.

Sanitary Sewer Projects To Be Determined: A new project not previously in the CIP. A total of \$14.5 million over five years (FY 2008 - FY 2012) has been budgeted to address unforeseen conditions and cost increases in existing sanitary sewer projects and for any unplanned, unbudgeted future sanitary sewer projects.

Change In Project From Prior Fiscal Years:

- Annual funding, in the amount of \$250,000, has been extended to FY 2012 to continue ongoing repairs to the City's combined sewer system in order to comply with the VPDES permit;
- An additional \$830,000 has been budgeted in FY 2007 to address unforeseen site conditions and for the remediation of contaminated soil conditions associated with the Royal Street Relief Sewer project;
- An additional \$1.7 million has been budgeted to provide for the construction of the first phase of the Holmes Run Trunk Sewer project. The funding for this project has also been accelerated. The project is now budgeted over two years (FY 2007 and FY 2008) rather than the three years reflected in the FY 2006 - FY 2011 Approved CIP;

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- Funding, in the amount of \$100,000, for Environmental Restoration projects has been extended to FY 2012; and
- \$14.5 million over five years has been budgeted to address unforeseen conditions and cost increases in existing sanitary sewer projects and for any unplanned, unbudgeted future sanitary sewer or combined sewer related projects.

TASK TITLE	UNALLOCATED PRIOR-FY	FY 2007 CURRENT	FY 2008 FY + 1	FY 2009 FY + 2	FY 2010 FY + 3	FY 2011 FY + 4	FY 2012 FY + 5	TOTAL
COMBINED SEWER MITIGATION	1,825,190	250,000	250,000	250,000	250,000	250,000	250,000	3,325,190
CORRECT INFILTRATION/ INFLOW	0	200,000	0	0	0	0	0	200,000
ENVIRONMENTAL RESTORATION	225,000	0	100,000	0	100,000	0	100,000	525,000
HOLMES RUN TRUNK SEWER	4,302,000	3,000,000	1,600,000	0	0	0	0	8,902,000
SEWER MAP UPDATE	165,000	300,000	0	0	0	0	0	465,000
SANITARY SEWER PROJECTS TO BE DETERMINED	0	0	1,580,000	3,280,000	3,180,000	3,280,000	3,180,000	14,500,000
ROYAL STREET RELIEF SEWER	0	830,000	0	0	0	0	0	830,000
TOTAL PROJECT	6,517,190	4,580,000	3,530,000	3,530,000	3,530,000	3,530,000	3,530,000	28,747,190
LESS REVENUES	0	0	0	0	0	0	0	0
SEWER FEE FUNDED	6,517,190	4,580,000	3,530,000	3,530,000	3,530,000	3,530,000	3,530,000	28,747,190

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The sanitary sewer line maintenance charge for FY 2007 remains at \$1.00 per 1,000 gallons of water consumption as part of the Council approved multi-year phased rate increase intended to attain full cost recovery of all sanitary sewer maintenance and construction expenditures. The rate increase began in FY 2004 with an increase from \$0.20 per 1,000 gallons to \$0.40 per 1,000 gallons. The FY 2005 rate was \$0.60 per 1,000 gallons. In FY 2006, the rate was increased to \$1.00 per 1,000 gallons of water. Each \$0.20 increment of the fee equates to approximately \$14 per year for a typical household. A higher rate may be needed beyond the \$1.00 rate in subsequent fiscal years if VADEQ mandates new CSO requirements. The revenue from the fees collected will be used for the following:

SANITARY SEWERS SOURCES AND USES

SOURCES	FY 2006	FY 2007
Use of Unbudgeted Balances	\$4,585,459	\$0
Usage Fee - Operating	2,800,000	2,800,000
Usage Fee - Capital	2,779,000	2,043,895
Connection Fee - Capital (Budgeted)	900,000	3,000,000
Sources Subtotal	\$11,064,459	\$7,843,895
USES		
Reconstruction and Extension	\$520,000	\$820,000
Sewer Map Update	0	300,000
Holmes Run Trunk Sewer	3,035,000	3,000,000
Combined Sewer Mitigation	525,000	250,000
Infiltration/Inflow	4,200,488	200,000
Royal Street Relief Sewer	0	830,000
Environmental Restoration	100,000	0
Sanitary Sewer Projects to be Determined	0	0
Operating Expenditures /1	1,571,000	1,380,000
Debt Service	1,112,971	1,063,895
Uses Subtotal	\$11,064,459	\$7,843,895
ENDING BALANCE	\$0	\$0

/1 Includes \$1,016,000 in Personnel costs; \$484,000 in Non-Personnel costs; and \$71,000 in indirect costs.

STORM SEWER RECONSTRUCTIONS AND EXTENSIONS

<u>Subtasks</u>	<u>Priority</u>	<u>Estimated Useful Life of Improvement</u>	<u>Project Manager</u>
Extension and Replacement of Storm Sewers	Essential	25 years	T&ES
Channel Restoration	Essential	5 years	T&ES
MS4 Permit Program NPDES Permit	Essential	5 years	T&ES

Project Summary: This project provides for extensions and replacements of storm sewers, and for the reconstruction of deteriorated storm water channels.

Extension and Replacement of Storm Sewers: \$1.2 million over six years is budgeted for this continuing essential infrastructure maintenance project is used both for tasks unforeseen at the time of budget preparation and for scheduled projects. Prior year unallocated monies remain budgeted for the replacement of the 72 inch corrugated metal (CM) pipe at Edsall Road and Cameron Station that has shown signs of potential structural failure and for several other projects related to deteriorating conditions and new developments. Unallocated funds also will be used for the following projects identified in FY 2005: sewer reconstruction at the 900 block of South Fairfax; sewer separation at the 800 block of South St. Asaph Street; sewer extension on North Quaker Lane between King Street and Osage Street; and sewer reconstruction with street reconstruction on North Ripley Street between Holmes Run and Taney Avenue and on Maple Street between Hooff's Run and Little Street.

Storm sewer projects to be addressed in this CIP include the following:

- A hydraulic study of the storm water shed to determine capacity inadequacies in various locations of the Commonwealth Avenue storm water outfall system; and
- The reconstruction of storm sewers as identified in Warwick Village.

\$300,000 remains budgeted in FY 2007 for the reconstruction of an existing storm sewer and construction of an additional storm sewer at Saylor Place.

Channel Restoration: \$203,000 per year over six years (FY 2007 - FY 2012) is budgeted for channel restoration. This project includes the assessment of City streams and flood control channel projects. Erosion damage, stream corridor condition, grade control structures and storm sewer discharge points will be evaluated and repairs will be prioritized. Designs and construction for stream stabilization/restoration and City stormwater discharge modifications will be accomplished with these monies. In addition, a total of \$1.0 million over two years (\$500,000 in both FY 2008 and FY 2009) remains budgeted for channel maintenance and stream restoration of Taylor Run near Janney's Lane.

T&ES staff has been working with several residents along Key Drive and Francis Hammond Parkway to address the replacement of several driveway culverts that have deteriorated and become unsafe. Staff has also recently received several complaints from residents on the upstream section of this drainage channel, indicating that they have been experiencing flooding during heavy storm events. T&ES will perform a hydraulic analysis and drainage design to alleviate the flooding condition. \$1.0 million over two years (FY 2007 and FY 2008)

STORM SEWER RECONSTRUCTIONS AND EXTENSIONS

remains budgeted to alleviate upstream flooding on Key Drive. Construction is scheduled to begin in Spring 2006.

Municipal Separate Storm Sewer System (MS4) Permit Program, NPDES Permit: The Federal Water Quality Act of 1987 required that small municipalities obtain storm water discharge permits for their municipal separate storm sewer system (MS4) under Phase II of the National Storm Water Program. The City submitted an application for a MS4 permit to the Virginia Department of Environmental Quality (VDEQ) and received an approved permit effective July 8, 2003.

The permit requires that the City develop, implement and enforce a storm water management program designed to reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP), protect the water quality and satisfy the appropriate water quality requirements of the Clean Water Act. The permit allows up to five years from the date of the permit issuance for the City to develop and implement the program. The City's Storm Water Management Program will have to be fully developed and implemented by the end of the first permit term (2008).

The MS4 Permit has numerous requirements including an illicit discharge detection and elimination program and associated concept designs; preliminary concept designs of structural and non-structural floatable controls; and best management practices. Identifying needs and conducting preliminary concept designs for post-construction storm water management will be included. In addition to required data collection and reporting activities, this project will fund required public education, outreach, involvement and citizen participation.

\$175,000 in prior year unallocated monies remain for initiating the implementation of the programs as required by the permit.

Change In Project From Prior Fiscal Years:

- Annual funding for channel restoration, in the amount of \$200,000, has been extended through FY 2012; and
- Annual funding for storm sewer construction, in the amount of \$203,000, has been extended through FY 2012.

STORM SEWER RECONSTRUCTIONS AND EXTENSIONS

TASK TITLE	UNALLOCATED PRIOR-FY	FY 2007 CURRENT	FY 2008 FY + 1	FY 2009 FY + 2	FY 2010 FY + 3	FY 2011 FY + 4	FY 2012 FY + 5	TOTAL
CHANNEL RESTORATION	590,000	200,000	200,000	200,000	200,000	200,000	200,000	1,790,000
TAYLOR RUN AT JANNEY'S LANE	0	0	500,000	500,000	0	0	0	1,000,000
NPDES STORM WATER PROGRAM	175,000	0	0	0	0	0	0	175,000
KEY DRIVE FLOOD MITIGATION	0	150,000	850,000	0	0	0	0	1,000,000
STORM SEWERS	193,500	503,000	203,000	203,000	203,000	203,000	203,000	1,711,500
TOTAL PROJECT	958,500	853,000	1,753,000	903,000	403,000	403,000	403,000	5,676,500
LESS REVENUES	0	0	0	0	0	0	0	0
NET CITY SHARE	958,500	853,000	1,753,000	903,000	403,000	403,000	403,000	5,676,500

ORONOCO OUTFALL

<u>Subtasks</u>	<u>Priority</u>	<u>Estimated Useful Life of Improvement</u>	<u>Project Manager</u>
Oronoco Street Outfall	Essential	25 years	T&ES

Project Summary: This project provides funding to address the ground contamination at the Oronoco Sewer Outfall.

Project Description: \$2.1 million in prior year unallocated monies remains budgeted to continue this project to address ground contamination at the Potomac River Oronoco Street Outfall caused by coal tar contaminants from the former City (and then Washington Gas) owned Alexandria Gas Works that operated in the 19th and 20th centuries. The City has been accepted into the Virginia Voluntary Remediation Program for the site with the Virginia Department of Environmental Quality (VDEQ). The City has retained an environmental consultant to study the extent of contamination and to develop and implement a remediation program to clean up the site. Washington Gas is working cooperatively with the City on this matter.

The preliminary site investigation was completed in FY 2001. The next step is to complete a Site Characterization/Risk Assessment and Remedial Alternative Screening Report. The additional sampling needed for the risk analysis and remedial screening has been completed. The City performed extensive air monitoring in FY 2003 and FY 2004 and initiated short-term corrective actions in FY 2004. The final Site Characterization/Risk Assessment and Remedial Alternative Screening Report was submitted to VDEQ in FY 2004 and VDEQ reviewed and accepted the report. With VDEQ input, the City has developed a Corrective Action Plan (CAP) and is continuing its community outreach efforts. Implementation of the CAP began in FY 2004 with the installation of the free product recovery system. In FY 2005, work will continue involving relining the storm sewer and designing a hydraulic control and treatment system. The installation of the hydraulic control and treatment system is scheduled to be operational in FY 2007. At the conclusion of the design phase of this system, construction costs will be more clearly defined, and funding needs will be more clearly identified.

Once the system is functioning effectively, the City intends to dredge and remove the most contaminated sediment near the outfall. The City received additional funding from a settlement with Washington Gas Light Company, totaling \$926,505, which has been used to fund clean up, monitoring, maintenance and operation costs. Construction is expected to begin in early 2006.

Changes in Project from Prior Years:

- There has been no change in planned funding for this project.

ORONOCO OUTFALL

TASK TITLE	UNALLOCATED PRIOR-FY	FY 2007 CURRENT	FY 2008 FY + 1	FY 2009 FY + 2	FY 2010 FY + 3	FY 2011 FY + 4	FY 2012 FY + 5	TOTAL
ORONOCO OUTFALL	2,127,670	0	0	0	0	0	0	2,127,670
TOTAL PROJECT	2,127,670	0	0	0	0	0	0	2,127,670
LESS REVENUES	617,670	0	0	0	0	0	0	617,670
NET CITY SHARE	1,510,000	0	0	0	0	0	0	1,510,000

